CALIBRATION TECHNIQUE FOR COINCIDENCE IMAGING SYSTEMS

Abstract of the Disclosure

An imaging method using a plurality of radiation detectors **(12)** is disclosed. A plurality of coincidence radiation events are measured **(60)** associated with a point radiation source **(18)**. Initial values are assigned **(62)** for fitting parameters. Lines of response (LOR) are calculated **(64)** based upon the fitting parameters and the measured radiation events. A figure of merit is generated **(66)** that characterizes the apparent size of the point radiation source based upon the LOR's. The fitting parameters are optimized **(70)** using a minimization algorithm which includes iteratively repeating the calculating **(64)** and generating **(66)** steps to produce a minimized figure of merit. Correction factors are extracted from the optimized fitting parameters **(72)**. A set of radiation data is acquired from an associated subject. The radiation data is corrected for mechanical camera misalignment by correcting the spatial coordinates of the detected radiation events using the correction factors. An image representation is reconstructed from the corrected radiation data.